Aim: Trainees need to acquire technical competencies to perform major procedures prior to taking up consultant posts. This study analyses the outcomes of infrainguinal bypass surgery performed by a consultant surgeon or supervised trainee,compared with those performed by unsupervised senior vascular trainees.
Methods: Data were collected on all patients who underwent infrainguinal bypass grafting at our instituition between 2000 and 2009.30-day mortality,limb salvage,graft patency rates,and overall survival was assessed.
Results: 500 infrainguinal bypass procedures were performed. 377 cases were performed by the consultant, or a supervised trainee (17% above knee, 37% below knee, 46% distal), and 72 were performed by unsupervised vascular trainees (17% above knee, 47% below knee, 37% distal). Vein graft was used in 76% and 80% cases respectively. 30 day mortality was significantly higher after operation by a consultant, 6.6%, compared to a trainee 0% ($p < 0.0001$ $\chi 2$). Limb salvage (17%)and graft patency rates (66%)were comparable, as was overall survival(consultant vs trainee; at 2 year 75% vs 72% $p = 0.997$ Log rank).
Conclusion: Satisfactory patient outcomes after infrainguinal bypass surgery can be achieved by unsupervised experienced vascular trainees. The higher 30-day mortality in the consultant operated group probably reflects appropriate case selection, with training allocated to fitter patients.

REALLOCATION OF FOUNDATION PROGRAMME DOCTORS FROM TEAMS TO WARDS REDUCES MORTALITY FROM PROXIMAL FEMORAL FRACTURE

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Introduction: Proximal femoral fractures are common and carry a 30 day mortality of 10-20%. Alternative models of care have been described, however, no studies have assessed the re-allocation of junior doctors, who often care for patients on numerous wards.
Methods: This was a retrospective study of 559 consecutive patients admitted to a UK university teaching hospital with proximal femoral fracture. Foundation years 1 and 2 were re-allocated from consultant teams to wards; surgical trainees remained with teams. No alterations were made in numbers of doctors, shift patterns, hours, or any other factor associated with outcome.
Results: Mortality reduced from 13.9% to 7.2% ($p = 0.009$) and occurred later (17.0 days versus 13.4; $p = 0.022$) after intervention. There were no significant differences in 20 patient, fracture or operative factors associated with adverse outcome. There were no differences in cause of death, delay to operation, length of stay and post-operative complications, except wound haematomas which increased from 0.0% to 2.0% ($p = 0.035$)
Conclusion: Reallocation of Foundation doctors from teams to wards reduces and delays mortality in proximal femoral fracture, a model potentially applicable to other specialties. The mechanisms are unclear, but may include improved efficiency and contact time allowing more proactive and reactive care.

CAN PREOPERATIVE RADIOGRAPHIC MARKERS BE USED TO PREDICT LOOSENING OF TOTAL HIP ARTHROPLASTIES?

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91 patients with a cemented Charnley Elite plus total hip arthroplasty were reviewed to assess whether preoperative radiological markers could predict aseptic loosening. We compared 36 patients with post operative radiological signs of aseptic loosening and 55 patients with a well fixed stable femoral component. Preoperative x rays were assessed blindly in a standardised fashion for;- 1) Cortex ratio - medial femoral cortex 50 mm below the lesser trochanter divided by thickness of the shaft. 2) Canal ratio - Thickness of intramedullary canal at the level of the greater trochanter divided by that at the isthmus. 3) The Bombelli biological classification of OA which assesses the degree of osteophyte formation (atrophic, normotrophic and hypertrophic). Patients with loosening had narrower femoral cortices ($p = 0.05$) and were more likely to have presented with atrophic osteoarthritis ($p = 0.05$). The canal ratio however was not significantly related.

LOCALISATION AND IDENTIFICATION OF BACTERIA IN THE SKIN OF PATIENTS UNDERGOING PRIMARY KNEE AND HIP REPLACEMENT SURGERY AFTER SURGICAL SKIN PREPARATION

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Background: Arthroplasty infection rates are up to 2.5%1.Surgical skin preparation reduces surgical site infections2. However skin preparation removes only bacteria from the surface of the skin3, leaving deeper layers colonised.
Methods: After informed consent, 22 patients participated (13 knees, 9 hips). A swab and skin biopsy was taken after skin preparation with alcoholic povidone-iodine. The biopsy was cut aseptically in half. One half was disrupted using forceps. This half and the swab were cultured separately anaerobically at 37oC. Half of the biopsy was frozen in isopentane, cryosectioned and Gram stained.
Results: 7 of 20 swabs (2 S.epidermidis, 3 P.acnes, 1 S.aureus and 1 with both S.epidermidis and P.acnes) and10 of 22 biopsies grew bacteria (4 P.acnes, 3 S.epidermidis, 2 S.aureus and 1 S.capitis). Gram positive bacteria were seen for all biopsy sections.
Discussion: Selwyn and Ellis (1972) using iodine found over 99% of bacteria are removed from epidermis. In this study 35% remained on the surface when using povidone-iodine and 46% in deeper layers. 1. HPA, 2009. http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1259151994683 - accessed 06/01/2010 2. NICE, 2008. http://www.nice.org.uk/nicemedia/pdf/CG74FullGuideline.pdf accessed 06/01/2010 3. Lowbury E J. 1961. Journal of clinical pathology 14:85-90. 4. Selwyn S, Ellis H. 1972. Br Med J 1:136-140.

SAFETY OF AUTOLOGOUS BLOOD TRANSFUSION FOLLOWING INTRAOPERATIVE INTRAARTICULAR ROPIVACAINE ANAESTHESIA

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Introduction: Intraoperative local anaesthetic injection enables early mobilisation after total knee arthroplasty (TKA). Autologous blood transfusion reduces requirements, and complications, of allogenic blood transfusions. Currently these two techniques are not used together, due to concern of intravenous administration of toxic doses of local anaesthetic from the reinfusion drain. This pilot study investigates the safety of using these two techniques together.